

**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION  
DAM SAFETY PROGRAM  
Honolulu, Hawaii**

May 14, 2021

**Board of Land and Natural Resources  
State of Hawaii  
Honolulu, Hawaii**

**Regarding:** Dam Safety Enforcement Action on Ukumehame Reservoirs (MA-0140) for Failure to Comply with Notice of Deficiency, February 18, 2020

**Dam Owner:** West Maui Investors, LLC (Faraz Daneshgar)  
c/o 3D Investments, LLC  
468 N. Camden Drive, #100  
Beverly Hills, CA 90210

**Location:** Waikapu, Maui County

**Tax Map Key:** (2) 4-8-002:066, (2) 4-8-002:015, (2) 4-8-002:017, (2) 4-8-002:027,  
(2) 4-8-002:064, (2) 4-8-002:118

**Re-Submittal of Enforcement Action**

At the April 9, 2021 Board meeting, the owner of the Ukumehame Reservoirs, the West Maui Investors, LLC (Owner), requested a contested case hearing. On April 14, 2021, the Owner withdrew their request by email (see Attachment A). Accordingly, the matter will be discussed at the May 14, 2021 Board meeting.

**Background of Dam**

Ukumehame Reservoirs are comprised of two interconnected rock lined reservoirs, Ukumehame No. 2 and Ukumehame No. 3, located at the downstream end of the Ukumehame Gulch watershed on the south side of the Island of Maui (see Figures 1 and 2). These reservoirs are regulated as one structure as they are operated as a twin reservoir facility. The original date of construction is unknown, however is believed to have been constructed in support of the sugar industry in the early 1900s.

Ukumehame Reservoir No. 1 is a small unregulated pond further up in the gulch from Reservoir No. 2. Residential dwellings are situated downstream of Reservoir No. 2 & 3, which prompts classifying these structures as a high hazard potential dam (as the dam's failure could result in a probable loss of human life).

The Ukumehame reservoirs 1, 2 and 3 have historically been utilized for storage of a small portion of the flow diverted from Ukumehame Gulch and distributed to farms and

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other uses including water supply to residential areas. Attachment B describes the diversions into the reservoirs.

Ukumehame Reservoir Nos. 2 and 3 physical data:

Construction:	Earthen embankment dams with rock lined reservoir
Dam No. 2 Height:	21 ft high
Volume:	18 acre-ft (6 million gallons)
Dam No. 3 Height:	29 ft high
Volume:	26 acre-ft (8.9 million gallons)

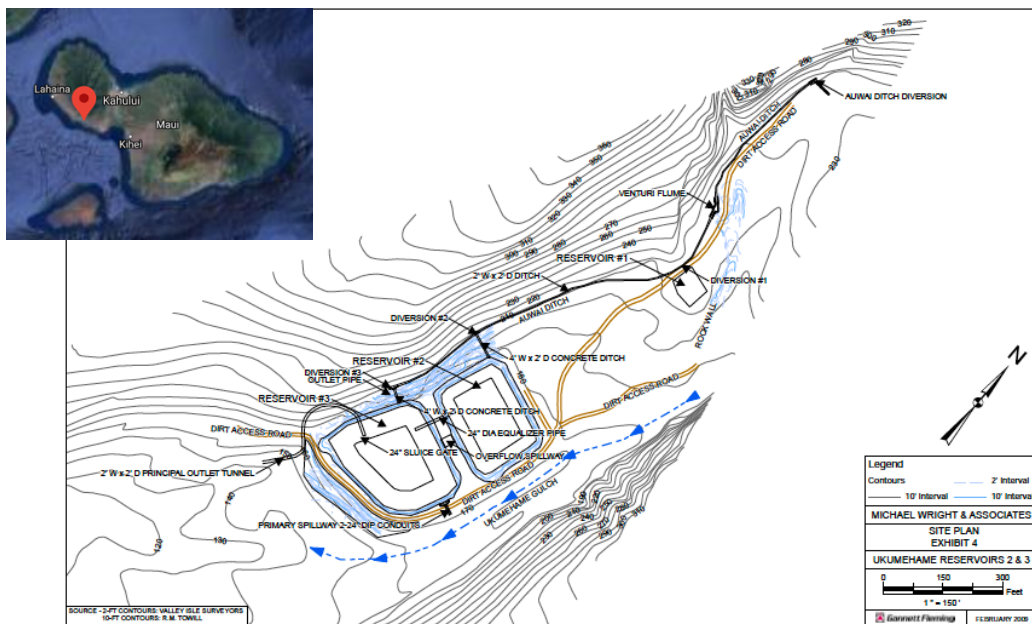


Figure 1. Map and aerial view of the Ukumehame Reservoirs.



Figure 2. Ukumehame Reservoirs No. 2 (left) and No. 3 (right). (2021)

Since 2008, four visual site inspections and a Phase 1 condition assessment have been conducted on the Ukumehame Reservoirs:

- DLNR visual inspections in 2008, 2011, 2013, and 2015.
- Gannett Fleming (Owner's Consultant) – Phase 1 Condition Assessment in 2009.

### **Primary Safety Issues**

Two primary safety issues exist at the dam facility:

1. A large flowing seep (estimated 30-50 gallons per minute), on the downstream slope of the dam from Reservoir 3 (figure 3). If allowed to persist, the seep could develop into a more serious problem and eventually cause a piping failure of the dam.
2. The spillways for both Reservoir Nos. 2 and 3 are undersized to handle a Probable Maximum Flood (PMF) of 15,161 cfs from Ukumehame Gulch. The Reservoirs would be overtopped during a PMF storm event.



Figure 3. Seepage at the downstream face of Reservoir 3.

### **Enforcement Actions & Owner's Response**

June 20, 2008, DNLR sent a letter directing the owner to immediately reduce the water level in Reservoir No.3 until the seep on the downstream slope stopped. The owner lowered the water level in the reservoir, and in a letter (April 13, 2009) notified the DLNR that Gannett Fleming had been retained to study the seepage and provide recommendations. In the April 2009 Condition Assessment Report performed by

Gannett Fleming, it was determined that Ukumehame Reservoirs would be overtopped by 0.1 feet during a 100 Year Storm event and “overwhelmed” by a PMF event.

DLNR worked with the owner and their consultant on the approval of a dam safety permit to remove the structure. A dam safety permit was approved by the DLNR Land Board and issued on November 14, 2017. (See the approved Dam Safety Permit No. 77 in Attachment C.) Subsequent to the issuing the permit, DLNR dam safety staff is not aware of any further action to initiate the construction of the removal work.

On February 18, 2020, the DLNR issued a Notice of Deficiency (NOD) (see Attachment D) to the Owner indicating the dam was in POOR overall condition and a threat to public safety due to one or more physical / operational conditions and deficiencies. As a HIGH Hazard Potential structure, the facility is required to pass the Full PMF with adequate freeboard as defined in HAR §13-190.1. The NOD required the Owner to comply with the remediation schedule summarized in Table 1, below.

To date, DLNR has not received a response to the 2020 NOD. However, in a meeting with DLNR staff on December 21, 2020, the Owner indicated their intent to send a letter to the DLNR on the Owner’s plans and situation and to officially respond to the 2020 NOD. The Owner also expressed a willingness to install a water level monitoring system and to begin submitting monthly monitoring reports. The Owner requested contact information from the USGS, who installs and maintains such systems. (See the meeting notes in Attachment E.) DLNR has not received any new information from the Owner since the December 21, 2020 meeting.

A summary and status of the NOD action items is provided in Table 1.

No.	Deadline	Item	Current Status
1	4/01/2020	Contract with a Consultant to complete engineering evaluation of deficiencies.	Completed. The Owner contracted Gannett Fleming to complete the necessary studies and designs to submit a permit application package in 2016.
2	5/30/2020	Install Water Level Monitoring System.	The Owner has failed to install a level monitoring system.
3	8/30/2020	Submit Technical Studies.	Completed. Design report prepared by Gannett Fleming submitted to DLNR.
4	8/30/2021	Submit Dam Safety Permit Application.	Dam Safety Permit No. 77 for removal issued on 11/14/2017.



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			Alterations to this permit scope or new design application submittal due.
5	8/30/2022	Start Construction.	Construction not started.
6	Monthly	Keep and maintain the reservoir empty under normal conditions.  Submit monthly monitoring reports including reservoir water level, photos of the water level at the staff gage and other pertinent information to the Department.	The Owner has kept the reservoirs empty but has failed to submit monthly monitoring reports.

Table 1. Summary and status of the action items from the February 18, 2020 NOD.

### **Staff Recommendations**

DLNR has informed the Owner of the deficiencies and the regulatory requirements in multiple reports and notices dating back to 2008. However, the Owner has not followed through on permanent resolution of the dam safety issues, they have not installed a water level monitoring system, and has failed to keep the Department informed of any status of the facility as requested. Accordingly, DLNR is recommending enforcement action by issuing fines as discussed below and summarized in Attachment F.

Pursuant to Hawaii Revised Statutes (HRS) §179D and Hawaii Administrative Rules (HAR) §13-190.1, the DLNR staff recommends the Board of Land and Natural Resources find the Owner of the Ukumehame Reservoirs (MA-0140), the West Maui Investors, LLC, in violation of HRS §179D-6(b)(17) for failing to adopt remedial measures as ordered by in the February 18, 2020 Notice of Deficiency Letter and subject to the following enforcement actions/penalties:

1. The West Maui Investors, LLC is fined \$5,000 for failing to install a water level monitoring system on the reservoir by DLNR deadline of 5/30/2020, pursuant to HRS §179D-6(b)(17).
2. The West Maui Investors, LLC is fined \$5,000 for failing to submit monthly monitoring reports including reservoir water level, photos of the water level at the staff gage, and other pertinent information to the DLNR on a monthly basis, pursuant to HRS §179D-6(b)(17).
3. The West Maui Investors, LLC shall pay all fines (total \$10,000) within sixty (60) days of the date of the Board's action.

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4. In the event the West Maui Investors, LLC fails to comply with the Board order to pay fines within the time allotted, the West Maui Investors, LLC shall be fined an additional \$5,000 per day until the ordered fine amount is paid.

Pursuant to HRS §179D-6(b)(17), the West Maui Investors, LLC shall be required to comply with the following actions by the deadlines shown:

Within ninety (90) calendar days of the date of the Board's action:  
Install Water Level Monitoring System - a fully functional, real-time reservoir water level gage with the readings accessible on the internet.

Within thirty (30) calendar days of the date of the Board's action:  
Submit monthly monitoring reports including reservoir water level, photos of the water level at the staff gage, and other pertinent information to the DLNR by email at [dlnr.en.fcads@hawaii.gov](mailto:dlnr.en.fcads@hawaii.gov).

By August 30, 2021, the West Maui Investors, LLC shall submit an application for a new design or alterations to the previously issued Dam Safety Permit No. 77 to remove the dam; or shall provide DLNR with a project schedule to complete the construction as approved in Dam Safety Permit No. 77. The project schedule shall include deadlines for submittal of proof of construction award and a notice to proceed with construction.

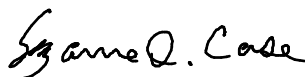
By August 30, 2022, the West Maui Investors, LLC shall start construction on the dam safety improvements (as stated in the 2020 Notice of Deficiency) and shall complete construction by November 14, 2022 (as required in Dam Safety Permit No. 77 general conditions).

Respectfully submitted,



CARTY S. CHANG  
Chief Engineer

Approved for Submittal:



SUZANNE D. CASE, Chairperson  
Board of Land and Natural Resources

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ATTACHMENTS:

- A Email from Daniel Byron, dated April 14, 2021, withdrawing Contested Case Hearing request from April 9, 2021 for Ukumehame Reservoirs
- B Flow Diversions from the Ukumehame Gulch into Ukumehame Reservoirs 1, 2, and 3
- C Approved Dam Safety Permit No. 77, issued November 14, 2017 Ukumehame Reservoirs (MA-0140) Dam Removal, Maui, Hawaii
- D Notice of Dam Safety Deficiency, issued February 18, 2020
- E Meeting Notes for Meeting on December 21, 2020 Between Ukumehame Reservoirs' Owners and DLNR Staff
- F Ukumehame Summary Sheet and Scorecard

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**ATTACHMENT A**

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Email from Daniel Byron, dated April 14, 2021, withdrawing Contested Case Hearing request from April 9, 2021 for Ukumehame Reservoirs (MA-0140)



**Subject:** [EXTERNAL] Ukumehame (West Maui Investors, LLC) - DLNR Board Meeting on April 9, 2021  
**Date:** Wednesday, April 14, 2021 at 8:15:26 AM Hawaii-Aleutian Standard Time  
**From:** Daniel Byron  
**To:** Koyamatsu, Tony  
**CC:** Mark Lane, Keoni Fursse

Tony,

On behalf of West Maui Investors, LLC, I would like to withdraw the contested case request that I made during the DLNR Board Meeting on April 9, 2021. I would like our issue originally on the April 9, 2021 agenda to be placed on the agenda for the DLNR Board Meeting in May 2021.

Please let me know if you have any questions or concerns.

**Thank you,**

**Daniel F. Byron II**

Director of Asset Management  
3D Investments, LLC  
468 N. Camden Drive, Suite 300  
Beverly Hills, CA 90210  
TEL: (310) 276-1290 x110 *office*  
TEL: (323) 528-6493 *cell*  
Email: [dbyron@3dinvestments.com](mailto:dbyron@3dinvestments.com)  
CalBRE: #01414248

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**ATTACHMENT B**

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Flow Diversions from the Ukumehame Gulch into Ukumehame Reservoirs 1, 2, and 3

## Flow Diversion

The following describes how a portion of the Ukumehame Gulch flow is diverted to the Ukumehame Reservoirs, as shown in Figure 5 below.

1. A portion of the Ukumehame Gulch flow is intercepted and captured by a concrete diversion structure 1,000 feet north of Reservoir No. 2. A gate valve controls the flow into a narrow earthen ditch along the west side of the Ukumehame Gulch valley. The ditch passes through a flow measuring Venturi flume 380 feet south of the diversion structure.
2. The first diversion from this ditch is 525 feet south of the diversion structure. It diverts a portion of the flow to Reservoir No. 1 through a 16-inch pipe. A concrete block in the ditch divides the flow into Reservoir No.1 and flow into the downstream irrigation ditch conveying flow to Reservoirs No. 2 and 3.
3. The second diversion from the irrigation ditch sends flow into the northwest corner of Reservoir No. 2. This is accomplished through the use of stop logs in front of a rectangular concrete flume.
4. The third diversion from the irrigation ditch similarly sends flow into the northwest corner of Reservoir No. 3. This is also accomplished through the use of stop logs in front of a rectangular concrete flume.
5. An 8-inch outlet pipe takes remaining flow (that has not been diverted into Reservoir Nos. 1, 2 and 3) south to provide usable water for showers and other uses for the residential property south of Reservoir No. 3.

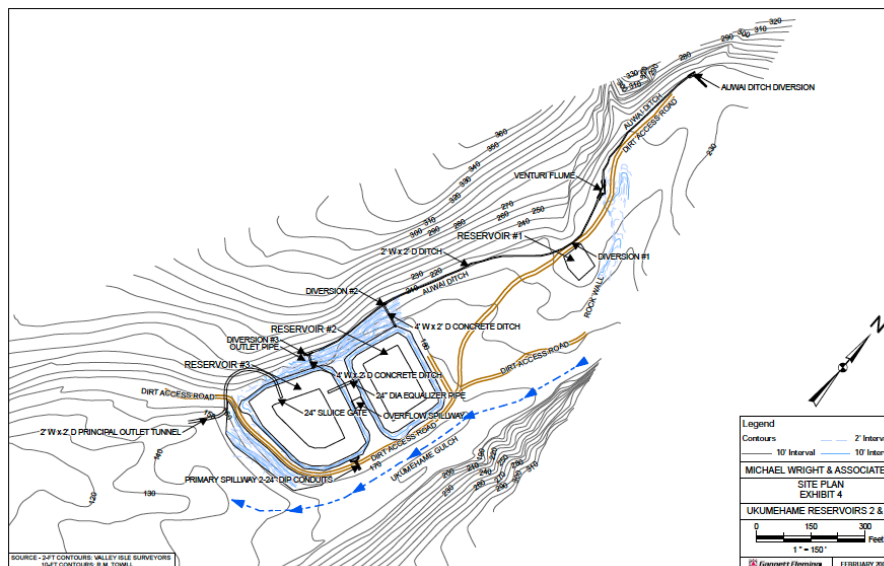


Figure 5. Plot plan. Source: Gannett Fleming Condition Assessment Report, April 2009.

Board of Land and Natural Resources  
Enforcement Action on Ukumehame Reservoirs (MA-0140) for  
Failure to Comply with Notice of Deficiency, February 18, 2020

### **ATTACHMENT C**

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Approved Dam Safety Permit No. 77, issued November 14, 2017  
Ukumehame Reservoirs (MA-0140) Dam Removal, Maui, Hawaii



DAVID Y. IGE  
GOVERNOR OF  
HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**NOV 14 2017**

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

Mr. Matthew S. Balven  
Gannett Fleming, Inc.  
3838 N. Central Ave., Suite 1900  
Phoenix, Arizona 85012

Dear Mr. Balven:

**UKUMEHAME RESERVOIR (MA-0140)  
DAM SAFETY PERMIT NO. 77  
DAM REMOVAL, MAUI, HAWAII**

Your permit application submitted, on January 19, 2016, for the Ukumehame Reservoir (MA-0140) – Dam Removal, has been examined and approved subject to the attached dam safety permit general conditions and the following special conditions:

1. The dam shall be removed in accordance with the approved plans and specifications as indicated on the following chart:

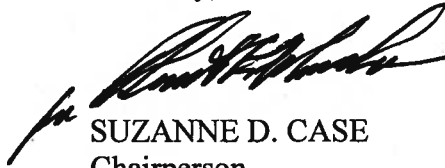
Plan Sheet(s)	Plan Date	Revision Date
Ukumehame Reservoirs Nos. 2 & 3 Dam Removal and Grading Plan Sheets G-01 to G-04, V-01, D-01, C-01, C-02, EC-01, EC-02	October 2017	N/A

2. Gannett Fleming Inc., or the owner's representative will ensure photos are submitted to the State Historic Preservation Division (SHPD) documenting the installation of the temporary protective measures (fencing) along the archaeological preservation buffers; identified as Buffer Areas 5 and 6 (as recorded in final plan, Subdivision file No. 4.876) prior to initiating other construction activities (Reference: SHPD log No. 2016.01884 and Doc No. 1710SL01).
3. The Department of Land and Natural Resources (Department) reserves the right to suspend or revoke this permit approval upon, either a finding of violation of any of the stipulated conditions or a determination of a threat to public health and safety from factors which may arise in the future.

4. The owner shall operate and maintain the dam and reservoir in accordance with Hawaii Revised Statutes, Chapter 179D, until the dam removal work is complete and receives final release from the Department.
5. The issuance of this permit does not create any liability on the part of the Department, its officers or any employee thereof for any damage that results from reliance on this permit.

If you have any questions, please call Mr. Carty Chang, Chief Engineer of the Engineering Division, at (808)587-0230.

Sincerely,

A handwritten signature in black ink, appearing to read "Suzanne D. Case", is written over the printed name.

SUZANNE D. CASE  
Chairperson

Attachments

c: Mr. Mark Lane, Owner  
Mr. Stewart Vaghti, Gannett Fleming Inc.

## **DAM SAFETY PERMIT GENERAL CONDITIONS**

### **APPROVAL OF PLANS AND SPECIFICATIONS FOR DAM AND RESERVOIR CONSTRUCTION, ENLARGEMENT, REPAIR, ALTERATION OR REMOVAL**

The following General Conditions shall be adhered to for all Dam Safety permits unless otherwise authorized in writing.

1. Actual construction, enlargement, repair, alteration or removal shall be completed within 5 years of issuance of the permit application approval unless an extension authorized in writing by the Board is issued.
2. Prior to the start of work the owner or applicant shall provide a construction engineer to ensure compliance with the approved plans and specifications and who shall have ultimate responsibility for the supervision of all inspection tasks. The construction engineer may assign some inspection tasks to a duly authorized agent under the construction engineer's supervision. The engineer shall be licensed in the State of Hawaii.
3. The construction engineer shall maintain a record of construction that at a minimum, shall include, daily activity, and progress reports, all test results pertaining to construction; photographs sufficient to provide a record of foundation conditions and various stages of the construction through completion, all geologic information obtained; and construction problems and remedies.
4. A construction quality assurance plan shall be prepared and submitted to the Department for approval prior to the start of construction, which details the minimum requirements of the construction engineer's observation of construction.
5. A construction schedule, which includes the notice to proceed date and estimated project duration and a construction emergency action plan shall be submitted prior to the preconstruction meeting.
6. A preconstruction meeting shall be held subsequent to submitting the quality assurance plan, construction schedule and construction emergency action plan, but not later than 14 days prior to the start of construction. All parties actively involved in the construction should be requested to attend, such as the dam owner, the design engineer, the construction engineer, the contractor and the Department.
7. The Department shall be notified 5 calendar days prior to the commencement of construction.
8. Any changes from the approved plans and specifications shall be approved by the design engineer and a change order, including details and supporting calculations, must be provided to the Department. Major changes must be submitted in writing with supporting documentation and approved in writing by the Department. No work shall be initiated until the approval by the Department or Board is received. Minor changes may be transmitted verbally and approved by the Department verbally provided that documentation of the change is provided to the Department within 10 days of the approval.

9. For new dam construction and for dams and reservoirs that have lowered the water level or have been drained to facilitate construction, the construction engineer shall file and obtain approval of a filling plan with the Department. The applicant/owner shall not proceed with the filling of the reservoir until it receives permission from the Department. The construction engineer shall provide documentation of monitoring during the filling operation.
10. Prior to the filling of the reservoir, the construction engineer shall submit one copy each of the approved Operations Manual and the approved Emergency Action Plan for the facility upon completion of the project as applicable.
11. The construction engineer shall give the Department at least ten days advanced notice of initial materials placement of the dam's foundation, in the cutoff trench, outlet backfill, outlet foundation, and any appurtenance requested by the Department in the approval of the plan for construction observation, to allow for observation by the Department.
12. Notice of substantial completion shall be issued by the construction engineer to the Department stating that the permitted improvements are functionally complete such that filling of the reservoir can be initiated with an approved filling plan.
13. The construction engineer shall give the Department fifteen (15) calendar days advance written notice prior to the project's final construction inspection. The construction engineer shall coordinate with the Department to conduct this inspection in the presence of the Department's dam safety personnel.
14. The construction engineer shall provide notice at least ten (10) days prior to initiating filling the reservoir, unless agreed at the final inspection.
15. If conditions are revealed which will not permit the construction, enlargement, repair, alteration, or removal of a safe dam or reservoir, the application for approval for construction, enlargement, repair, alteration, or removal shall be revoked.
16. A topographic survey of completed work including all monuments, inverts, crest alignment, spillways, and significant appurtenant features, when required by the Department shall be completed.
17. The applicant/owner shall utilize appropriate erosion control best management practice measures during construction to minimize turbidity (such as scheduling of work during period of low stream flow) and prevent debris and construction materials, including concrete, petroleum products, and other pollutants from enter the waters of the State. Construction related water and debris should be properly disposed of in a legal and environmentally safe manner and in accordance with the Department of Health and other Federal regulations.
18. The applicant/owner shall submit a copy of the dam safety application and the plans and specifications of the proposed improvements to the County Engineer of the County for which the dam resides for compliance with County codes.
19. Within fifteen (15) calendar days of completing the project, the applicant/owner or its representative shall provide the Department with a confirmation letter of compliance, signed and stamped by the construction engineer, indicating that the construction



was completed in accordance to approved plans and specifications including any field changes. The construction engineer shall submit the remaining construction completion documents which may include, but not be limited to, as-constructed drawing, final construction report, topographic survey, record of the location of permanent monuments, log of recorded water levels and other readings from the refilling operation, long-term instrumentation monitoring plan, and affidavit showing the actual cost of construction including engineering costs, within 60 calendar days of the submittal of the final construction inspection.

20. Construction completion documents and the construction engineer's certification shall be provided to the Department within 60 days of the final construction inspection. The Department will review the submitted items and furnish acceptance or denial within 60 days of receipt of satisfactorily completed construction completion documents and close out the dam safety permit.
21. This permit does not relieve the applicant/owner of their obligations to comply with all applicable Federal, State, and County regulations.
22. In the event that historic resources; including human skeletal remains, structural remains, cultural deposits, or sand deposits are identified during construction activities, cease work in the vicinity of the find, protect the find from any disturbance, and contact the State Historic Preservation Division at (808) 243-1285.
23. Compliance with Hawaii Revised Statutes 179D, and Hawaii Administrative Rules 13-190.1.

State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
Engineering Division  
Honolulu, Hawaii 96813

October 27, 2017

Board of Land and Natural Resources  
State of Hawaii  
Honolulu, Hawaii

**APPROVE ISSUANCE OF A DLNR DAM SAFETY PERMIT AND AUTHORIZE  
REMOVAL OF DAM FROM DLNR REGULATORY OVERSIGHT  
PERMIT NO. 77 – UKUMEHAME RESERVOIRS (MA-0140)  
DAM REMOVAL, MAUI, HAWAII**

The Department of Land and Natural Resources (Department), Engineering Division (Division) hereby submits an application for your approval and authorization for the Chairperson and Department to stipulate conditions and issue a Dam Safety Permit for the subject application, "Ukumehame Reservoirs (MA-0140) - Dam Removal", pursuant to Chapter 179D Hawaii Revised Statutes and Administrative Rules, Chapter 13-190.1.

**APPLICANT:**

Mr. Matthew S. Balven  
Gannett Fleming  
3838 N. Central Ave., Suite 1900  
Phoenix, AZ 85012

**OWNER CONTACT:**

Mr. Mark Lane  
Uka, LLC (West Maui Investors)  
468 N. Camden Drive, Suite 300  
Beverly Hills, CA 90210

**Approved by the Board of  
Land & Natural Resources  
at the meeting held on  
OCT 27 2017**

**SUMMARY OF REQUEST:**

Dam Safety Permit Application for the removal of the Ukumehame Reservoirs, Maui, Hawaii, See Exhibit 1.

**LOCATION:** Maui, Hawaii, TMK: (2) 4-8-002: 015, 017, 027, 064, 066, 118 See Exhibit 2.

**BACKGROUND:**

Ukumehame Reservoirs consists of 2 reservoirs. Ukumehame Reservoirs Nos. 2 & 3 are earthen embankment reservoirs constructed along the west side of Ukumehame Gulch on the island of Maui, Hawaii. The total storage capacity of the reservoirs is 35 acre-feet (11.4 million gallons). The reservoirs have not been utilized for water supply to downstream users for many years. The dams are believed to have been constructed from onsite excavated material; however, details about the date of construction and materials used are not available. Reservoir Nos. 2 & 3 are separated by an approximately 30-foot wide earthen embankment. Reservoir No. 2 discharges into Reservoir No.

3 by way of both an uncontrolled concrete emergency spillway and a 24-in equalizer pipe within this embankment. The Reservoir No. 3 emergency spillway is located along the eastern edge of Reservoir No. 3 and discharges uncontrolled into Ukumehame Gulch. The Reservoir No. 3 principal outlet is located along the western edge of the reservoir and is a 24-in x 24-in box conduit, which is controlled at the upstream end by a sluice gate that is currently not operational. Inflow into Reservoir Nos. 2 & 3 comes primarily from the Auwai Ditch, which diverts flow from Ukumehame Gulch approximately 1,000 feet north of Reservoir No. 2. This diversion is controlled by a manually operated gate valve. Auwai Ditch is an earthen and concrete-lined ditch approximately 24-in x 24-in. Each of the two Ukumehame Reservoirs has an independent diversion from Auwai Ditch to control inflows and small contributing watersheds to the north and northwest. In June 2008, an inspection of the dam revealed a high velocity seepage flow, estimated to be greater than 100 gallons per minute (gpm) above the toe on the south side of Reservoir #3. DLNR ordered the owner to lower the reservoir to such a level that seepage from the lower embankment has ceased or is flowing below 20 gpm. Since then, Reservoir #2 was drained and Reservoir #3 was kept at approximately 8 foot level (gage height), which is 10 feet below the normal water level.

#### PROJECT DESCRIPTION:

The reservoirs will be removed by the removal of the embankment with a bottom width of 20 feet and a side slope of 2H:1V. This will result in a 200-foot-long channel spanning the distance from the original reservoir bottom to the natural gulch downstream. This “new” channel will be lined with grouted riprap to provide erosion control. The completion of this repair will result in lowering the effective height and volume capacity of the dam such that it will fall below the requirements that satisfy the definition of a dam, pursuant to Hawaii Revised Statutes Chapter 179D. The owner of the development will be responsible for the maintenance of the structure after the removal of the embankments. See Exhibit 3

#### CHAPTER 343 – ENVIRONMENTAL ASSESSMENT:

The project is entirely on privately owned lands and does not trigger the requirement for completion of an environmental assessment. See Exhibit 4 for evaluation

#### HAWAII REVISED STATUTES CHAPTER 6E-8 HISTORIC PRESERVATION REVIEW

The Division consulted with the State Historic Preservation Division (SHPD) for compliance with the Chapter 6E-8 requirements. A review of SHPD records indicates that the only historic property identified within the current project area is Site 50-50-0804438, an irrigation ditch slated for preservation, but still in operational use by residents living the Ukumehame Gulch. The dam removal proposal follows protective measures as stipulated in the preservation plan, which will include installation of orange construction fencing to identify a 10-foot buffer zone from the ditch. Based on available information, SHPD’s determination is **no historic properties affected** for the proposed project. SHPD stipulates the following:

- (1) Gannett Fleming Inc., will ensure photos are submitted to SHPD documenting the installation of the temporary protective measures (fencing) along the archaeological preservation buffers identified as Buffer Area 5 and 6 (as recorded in final plan, Subdivision file No. 4.876) prior to initiating other construction activities. Also, the requirement will be added to the plans or specifications (**This is in the construction specification Sheet G-04 under General Notes #23**);
- (2) DLNR Dam Safety includes stipulation #1 in the permit conditions (**Stipulation #1 will be in the special conditions in the Dam Safety Permit**); and

- (3) The following is attached to the permit: *In the event that historic resources; including human skeletal remains, structural remains, cultural deposits, or sand deposits are identified during construction activities, cease work in the vicinity of the find, protect the find from any disturbance, and contact the State Historic Preservation Division at (808) 243-1285. (This note is in the Dam Safety Permit General Conditions note #22)*  
See Exhibit 5 and 7.

AGENCY CONSULTATION:

The Division sent out notices to various agencies for their comments on this application. A compilation of the comments from the agencies are posted on Exhibit 6.

REMARKS:

The applicant has completed a basis of design, plans and specification and requests for the approval of a dam safety permit. The Department and its engineering consultant, Kleinfelder West, Inc. has reviewed the documents and concluded that it is sufficient for its intended purposes. The subject reservoirs are off stream, fed by a diversion ditch. The reservoir storage was used to irrigate sugar and pineapple fields and since the closing of sugar and pineapple plantation, water storage in the reservoir has not been used for many years and the ditch was modified by the owner replacing it with an 8-inch HDPE pipe diverting the water directly to current downstream users. /This modified feed satisfies the need of downstream users without the use of stored water from the reservoirs. A 2-inch HDPE line tees off from the 8-inch pipe to supply water to the taro patch situated upstream of the reservoirs. The hydrologic analysis provided by the design engineer, Gannett Fleming, shows the peak inflows during the 100-year, 24-hour storm into Reservoir Nos. 2 & 3 are 62.3 cfs. and 104.5 cfs., respectively. The peak 100-year, 24-hour flow within Ukumehame Gulch is 7,696 cfs. Under existing conditions, this entire flow is contained within the gulch and does not overtop into the reservoirs. The breach is designed to discharge into Ukumehame Gulch at the southeastern corner of Reservoir No. 3. This location and geometry of the breach are designed to reduce diverse impacts to the downstream channel and properties. The design accomplishes this because it maintains historic flow patterns by discharging directly into the gulch and directs discharges away from the downstream residence. Staff recommends approval of this permit application.

SPECIAL CONDITONS:

1. Gannett Fleming Inc. or the owner's representative will ensure photos are submitted to SHPD documenting the installation of the temporary protective measures (fencing) along the archaeological preservation buffers identified as Buffer Area 5 and 6 (as recorded in final plan, Subdivision file No. 4.876) prior to initiating other construction activities

RECOMMENDATIONS:

That the Board:

1. Approve and authorize the issuance of the Dam Safety permit for this project.
2. Authorize the Chairperson to issue a Dam Safety Permit for the Ukumehame Reservoirs (MA-0140), removal (DLNR Dam Safety Permit No. 77) subject to such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.




3. Authorize the Department to oversee performance of the permitted work and take appropriate action including but not limited to selecting and procuring testing or professional services to verify the integrity of the construction work, approval of minor revisions and changes, issuance of fines and/or revocation of the permit, if necessary.
4. Authorize the Department to remove this dam from dam safety regulatory oversight and the requirements of Hawaii Revised Statutes Chapter 179D, upon satisfactory completion of the construction project and Dam Safety Permit Conditions.

Respectfully submitted,

  
for CARTY S. CHANG  
Chief Engineer

APPROVED FOR SUBMITTAL:

  
SUZANNE D. CASE, Chairperson  
Department of Land and Natural Resources

- Exhibit(s):
1. Owner Permit Application
  2. Location Maps
  3. Construction Drawing pages
  4. Chapter 343 Environmental Assessment Review
  5. HRS Chapter 6E-8 Review
  6. Agency Consultation
  7. General permit conditions

State of Hawaii  
BOARD OF LAND AND NATURAL RESOURCES  
Department of Land and Natural Resources  
Engineering Division

DAM SAFETY PERMIT  
APPLICATION FOR APPROVAL OF PLANS AND SPECIFICATIONS FOR CONSTRUCTION,  
ENLARGEMENT, REPAIR, ALTERATION, OR REMOVAL OF A DAM

Date of Application: 1/19/2016

Applicant:

Contact Name: Matthew S. Balven Firm / Company: Gannett FlemingMailing Address 3838 N. Central Ave., Suite 1900, Phoenix, AZ 85012Telephone: 602-553-8817 Fax: 602-553-8816 Email: mbalven@gfnet.com

The Applicant hereby applies to the Board of Land and Natural Resources for the approval of the attached plans and specification for the Ukumehame Reservoir Removal (construction, etc.) in accordance with Chapter 179D HRS (as amended by Act 262, SLH 2006), and subject to the provisions, conditions, and limitations of the current Hawaii Administrative Rules and various DLNR dam safety guidelines.

Accompanying this application are:

(please check)

- |   |                   |
|---|-------------------|
| 1. Filing fee equal to 2% of the Detailed Cost Estimate + Eng costs w/ calculation (to be submitted by owner) | <u>X</u>          |
| 2. Two (2) copies of the Detailed Cost Estimate   | <u>X</u>          |
| 3. Two (2) copies of the Final Design Report  | <u>X</u>          |
| 4. Two (2) copies of the Plans  | <u>X</u>          |
| 5. Two (2) copies of the Specifications   | <u>(on Plans)</u> |
| 6. Proposed Construction Schedule   | <u>X</u>          |
| 7. Supporting documents:  | <u>X</u>          |
| 8. One (1) electronic copy of all the above   | <u>X</u>          |

NAME OF STRUCTURE: Ukumehame Reservoir Nos. 2 & 3 Removal, NatID HI00140 (StateID MA-0140)DAM OR RESERVOIR LOCATION: Latitude: -156.5871, Longitude: 20.8099Island: MauiTax Map Key: (2) 4-8-002: 015, 017, 027, 064, 066, 118

Attach USGS topographic map (scale 1" = 2000') and property tax map (showing location access to site, proposed work)

State Land Use District: X Agriculture      Urban      Rural      Conservation

## BRIEF DESCRIPTION OF WORK TO BE PERFORMED

Removal of Ukumehame Reservoirs 2 & 3 by breaching.

**TECHNICAL INFORMATION:**

DLNR-Dam Safety-Sheet 2

1. Drainage Area 0.024 sq. miles or 15.4 acres
2. Classification of Dam (Hazard/Size) High Hazard
3. Type of Structure Earthen Embankment
4. Elevation-Area-Capacity Data:

	Elevation	Surface Area (acres)	Total Storage Volume (acre-feet)
Natural Streambed	NA	NA	NA
Primary Spillway	171.7 ft	~2	35
Secondary Spillway	NA	NA	NA
Top of Dam	174.0 ft	2.3	44
Design Water Level	Unknown		
Invert of Drain	Unknown		
5. Spillway Details (Type, Dimensions, Material) (for Ukumehame Res. 3)  
Primary: Ungated concrete structure, 4 cells, 5' wide x 2.5' high (total 20' x 2.5')  
Secondary: NA
6. Purpose of Structure Irrigation  
(water supply, irrigation, recreation, real estate development, etc.)
7. Attach rainfall and stream flow records, and flood-flow records and estimates (as accurately as may be readily obtained)

**ADDITIONAL INFORMATION**

1. Primary Owner Contact (if different from applicant) Mark Lane  
Owner Company or Entity: Uka, LLC (West Maui Investors)  
Mailing Address 468 N. Camden Dr., Ste 300, Beverly Hills, CA 90210  
Telephone: 310-276-1290 Fax: \_\_\_\_\_ Email: \_\_\_\_\_
2. Registered Hawaii Professional Engineer who prepared the plan Stewart Vaghti, PE  
Mailing Address 3838 N. Central Ave, Suite 1900, Phoenix, AZ 85012  
Registration No. \_\_\_\_\_  
Telephone: 602-553-8817 Fax: 602-553-8816 Email: svaghti@gfnet.com
3. Registered Professional Engineer to be responsible for inspection during construction Stewart Vaghti, PE
4. Contractor (If known) Unknown  
Mailing Address \_\_\_\_\_  
Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_
5. List all other permits applications submitted to other governmental agencies:  
\_\_\_\_\_  
\_\_\_\_\_
6. Anticipated effect of proposed structure on natural environment: Limited effect expected,  
small drainage area previously impounded will now flow into Ukumehame Gulch.

7. List all other parties that have ownership or other interest on the parcels where the dam and reservoir are located and identify their interest in the property. The Owners herein listed below concur with the work proposed within this application by the applicant and by his/her signing hereto, the owner of the land extends to the Board of Land and Natural Resources, and its designated representatives, a right-of-entry onto the project site to conduct any investigations or inspections required in compliance with the provisions of Chapter 13-190.1, Hawaii Administrative Rules. (Submit additional copies of this sheet should there be more owners)

Joseph Daneshgar, Manager  
 (Printed Name & Signature of Owner)

\_\_\_\_\_  
 (Address / TMK/Interest in Dam or Reservoir)

\_\_\_\_\_  
 (Printed Name & Signature of Owner)

\_\_\_\_\_  
 (Address / TMK/Interest in Dam or Reservoir)

\_\_\_\_\_  
 (Printed Name & Signature of Owner)

\_\_\_\_\_  
 (Address / TMK/Interest in Dam or Reservoir)

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 (Printed Name & Signature of Owner)

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 (Address / TMK/Interest in Dam or Reservoir)

\_\_\_\_\_  
 (Printed Name & Signature of Owner)

\_\_\_\_\_  
 (Address / TMK/Interest in Dam or Reservoir)

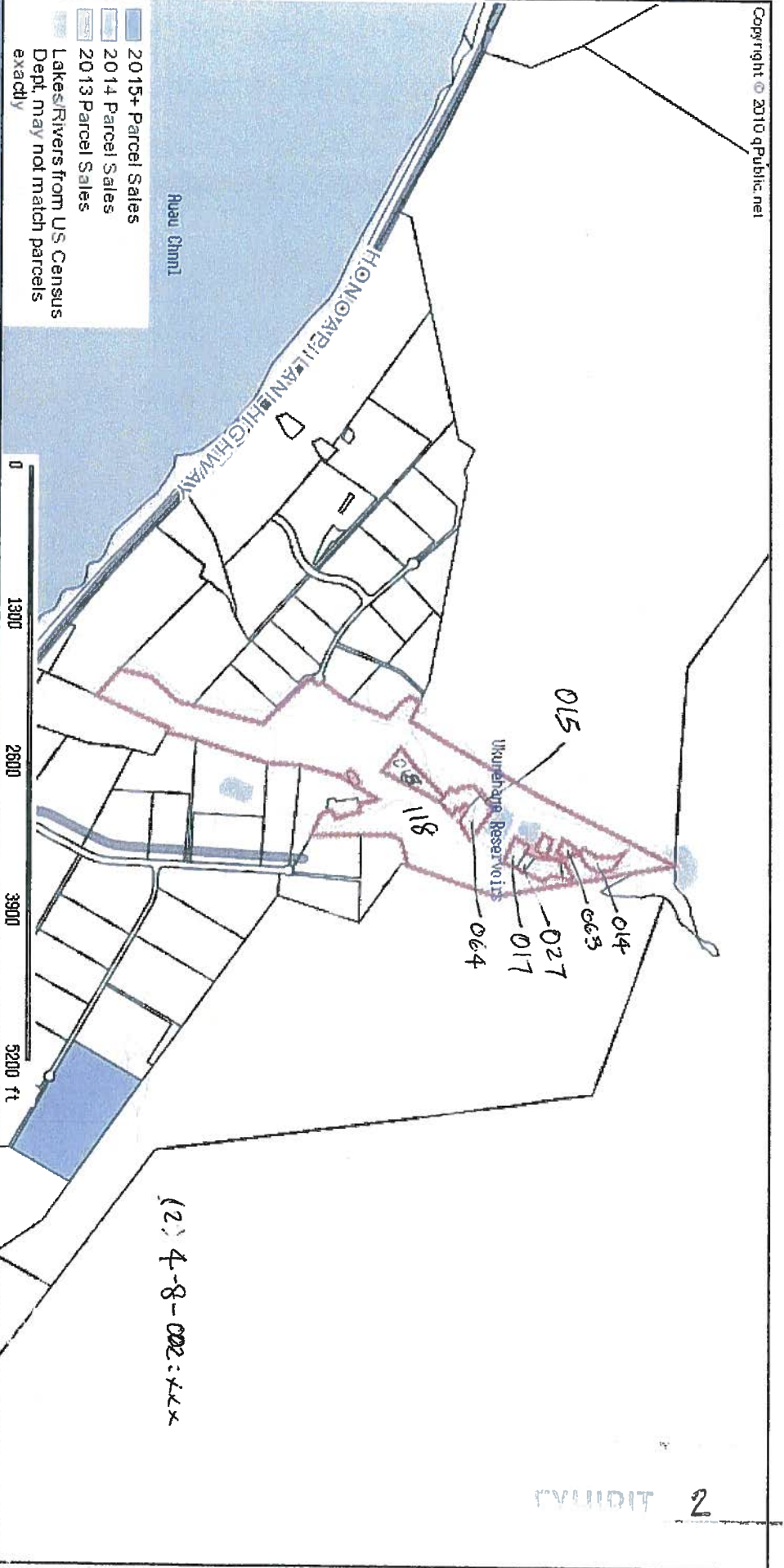
\_\_\_\_\_  
 (Printed Name & Signature of Owner)

\_\_\_\_\_  
 (Address / TMK/Interest in Dam or Reservoir)

I, Matthew S. Balven, the applicant, hereby certify that the information herein is true and factual to the best of my knowledge. Signing below indicates that the applicant understands that, if the permit requested is granted by the Board of Land and Natural Resources, the proposed work is to be initiated and completed within five (5) years of the approval date, unless specifically permitted in the approved permit terms and conditions.

  
 (Signature of Applicant & Title)

Date: January 19, 2016



Ukumehame Reservoirs

Parcel: 480021180000 Acres: 55.64

Name:	UKA LLC	Land Value	\$779,000.00
Site:	0 UKUMEHANE	Building Value	\$0.00
Sale:		Misc Value	\$0.00
		Just Value	\$0.00
		Assessed Value	\$779,000.00
		Exempt Value	\$0.00
		Taxable Value	\$779,000.00



(2) 4-8-002:xxx

The Maui County Assessor's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation. The assessment information is from the last certified taxroll. All data is subject to change before the next certified taxroll. PLEASE NOTE THAT THE PROPERTY APPRAISER MAPS ARE FOR ASSESSMENT PURPOSES ONLY NEITHER MAUI COUNTY NOR ITS EMPLOYEES ASSUME RESPONSIBILITY FOR ERRORS OR OMISSIONS — THIS IS NOT A SURVEY —

Board of Land and Natural Resources  
Enforcement Action on Ukumehame Reservoirs (MA-0140) for  
Failure to Comply with Notice of Deficiency, February 18, 2020

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**ATTACHMENT D**

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Notice of Dam Safety Deficiency, issued February 18, 2020

DAVID Y. IGE  
GOVERNOR OF  
HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

Feb 18, 2020

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FIRST DEPUTY

M. KALEO MANUEL  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

Faraz & Joseph Daneshgar  
West Maui Investors, LLC  
c/o 3D Instruments, LLC  
468 N. Camden Drive #100  
Beverly Hills, CA 90210

Ms. Janie Kramer  
Property Manager  
Commercial Properties of Maui Management, Inc.  
1962B Wells Street  
Wailuku, HI 96793

**Certified Mail**

Dear Messrs. Daneshgar & Ms. Kramer:

**UKUMEHAME RESERVOIRS (MA-0140), MAUI, HAWAII  
NOTICE OF DAM SAFETY DEFICIENCY**

The subject regulated dam/reservoir has been classified to be in a poor overall condition and a threat to public safety due to one or more physical / operational conditions and deficiencies identified by the Department of Land and Natural Resources (Department). This Notice of Dam Safety Deficiency supersedes the conditions stipulated in previously issued notice of deficiencies.

The subject facility is classified as a High Hazard Potential dam, as failure could jeopardize the lives of the downstream public. As a High Hazard Potential structure, the facility is required to pass the Full PMF (Probable Maximum Flood) with adequate freeboard as defined by HAR Chapter 13-190.1. The April 2009 Condition Assessment Report performed by your consultant Gannett Fleming, determined that Ukumehame Reservoirs would be overtopped by 0.1 feet during the 100 Year Storm event and "overwhelmed" by the PMF event.

Pursuant to Hawaii Revised Statutes (HRS) 179D-6, you are required to take the following remediation, and maintenance and monitoring actions, by the deadlines indicated:

1. **Remediation Schedule:**

**By 4/1/2020:**

- a. **Contract with Consultant:** Engage the services of a qualified consultant in dam-related work to complete an engineering evaluation of the deficiencies at the subject facility. Provide the consultant name, contact phone number and firm name to the Department by this date.

**By 5/30/2020:**

- b. **Install Water Level Monitoring System:** Install a real-time reservoir water level gage with the readings accessible on the internet.

**By 8/30/2020:**

- c. **Submit Technical Studies:** Submit reports to document compliance with HAR §13-190.1-4. Submit topography map, Hydrologic/Hydraulic studies, stability analysis and/or other applicable reports required to support the proposed improvements.

**By 8/30/2021:**

- d. **Submit Dam Safety Permit Application:** Submit a complete dam safety permit application package (HAR §13-190.1-20) to bring your facility into compliance with HAR §13-190.1-4

**By 8/30/2022:**

- e. **Start Construction:** Start any required Construction of the Dam Safety Permit improvements.


2. **Owner Maintenance and Monitoring:**

- f. Keep and maintain the reservoir empty under normal conditions.
- g. Submit monthly monitoring reports including reservoir water level, photos of the water level at the staff gage and other pertinent information to the Department's Dam Safety Program via email. Monthly reports shall be due by the first week of the next month. The initial report is due the first month following receipt of this notice.

Email reports to: [dlmr.en.fcids@hawaii.gov](mailto:dlmr.en.fcids@hawaii.gov)

Failure to comply with the Remediation and Maintenance and Monitoring actions by the indicated deadlines may result in penalties and other actions by the Board of Land and Natural Resources pursuant to HRS § 179D-6 and 8 and HAR § 13-190.1-5. Please contact Jesse Colandrea of my Engineering Division staff at (808) 587-0277 should you have any questions regarding this matter.

Sincerely,



SUZANNE CASE  
Chairperson



Board of Land and Natural Resources  
Enforcement Action on Ukumehame Reservoirs (MA-0140) for  
Failure to Comply with Notice of Deficiency, February 18, 2020

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**ATTACHMENT E**

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Meeting Notes for Meeting on December 21, 2020  
Between Ukumehame Reservoirs' Owners and DLNR Staff



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION  
POST OFFICE BOX 373  
HONOLULU, HAWAII 96809



# MEETING NOTES

## Ukumehame Reservoir Status Update Meeting

Date: Monday, December 21, 2020

Time: 10:00-11:00 am

Meeting Coordinator: Tony Koyamatsu, DLNR

Attendees: Daniel Byron, Ukumehame Water Association  
Mark Lane, Ukumehame Water Association  
Keoni Fursse, Kokua Realty  
Edwin Matsuda, DLNR  
Kristen Akamine, DLNR  
Tony Koyamatsu, DLNR

Conference Bridge: 808-451-0217, ID 612419

### Agenda

- |   |  |   |
|---|--|---|
| 1 | Status for dam relative to DLNR Notice-of-Deficiency (NOD) Letter of 2/18/20 | <ul style="list-style-type: none"><li>• Current plan for dam</li><li>• Water level gage</li><li>• Engineering studies</li><li>• Permit application timeline</li><li>• Construction timeline</li><li>• Monthly reports</li></ul> |
|---|--|---|

- |   |             |
|---|-------------|
| 2 | Other items |
|---|-------------|

### Discussion

1. Current Plans for the Dam.
  - a. The Ukumehame Water Association (UWA) took over as the formal owner for the Ukumehame Reservoir from the former owner, West Maui Investors. Pending funding availability, UWA plans to modify the Ukumehame Reservoir and reduce its capacity to bring it to a non-jurisdictional size dam. A permit was approved by the BLNR in Oct 2017 to remove the dam by lowering the effective height and volume capacity. However, UWA currently lacks the financial resources to proceed with construction, and has concerns that this is the only source of water for the downstream agriculture community. UWA acknowledged that the approved permit requires that construction be initiated within 5 years

of permit approval. UWA is seeking federal and state grants to fund their dam and well projects. DLNR will investigate and inform UWA of grant opportunities. (DLNR recommends that UWA reach out to the DLNR Commission on Water Resource Management (CWRM) – Drought Mitigation Program)

- b. UWA discussed a past CWRM ruling that reduced its ability to draw water from the Ukumehame Stream from 1.8 mgd to 45,000 gal/day, which has impacted their ability to develop a majority of their 46 lots. Accordingly, UWA has contracted consultant Tom Nance to assist with water resource plans. UWA wants to install new water supply wells as an alternate water source for its land users, but UWA also does not have sufficient funds for the wells.
  - c. The Ukumehame Reservoir lower reservoir currently remains empty and the upper reservoir is close empty at the 2-3 ft level. Ongoing seepage conditions prevents the reservoirs from retaining more than current levels, as stipulated in last DLNR Notice of Deficiency.
2. Engineering Studies. UWA has not conducted any engineering studies since Gannett Fleming was contracted to prepare the permit package approved in 2017.
  3. Water Level Gage. DLNR described a water level monitoring system used by other dam owners, which communicates real-time water level via satellite for on-line accessible data. The system is battery powered and recharged by photovoltaic panels. UWA is open to installing such a system and requested more information. DLNR will email UWA a contact at the USGS who installs and maintains such a system.
  4. Permit Application and Construction Timelines. See item 1.a. above.
  5. Response to NOD Letter. By 12/31/20, UWA will prepare a letter formally responding to the DLNR NOD letter from 2/18/20. UWA will also affirm the ownership change from West Maui Investors and provide new contact information for the dam.
  6. Monthly Reports required by the NOD were not discussed. (DLNR will email UWA to remind UWA of the requirement to submit monthly reports via email to [dlnr.en.fcds@hawaii.gov](mailto:dlnr.en.fcds@hawaii.gov)).

#### Action Items

No.	Item	Owner	Status
1.	Provide USGS contact information to UWA for installation of water level monitoring systems.	DLNR	Completed, 1/7/21.
2.	By 12/31/20, send letter to DLNR, responding to NOD letter from 2/18/20. The letter will also affirm the ownership change and provide new contact information.	UWA	
3.	Submit future monthly reports via email to <a href="mailto:dlnr.en.fcds@hawaii.gov">dlnr.en.fcds@hawaii.gov</a> .	UWA	

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**ATTACHMENT F**

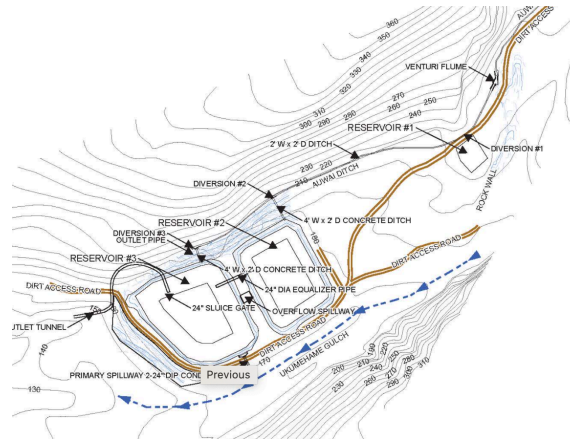
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Ukumehame Summary Sheet and Scorecard

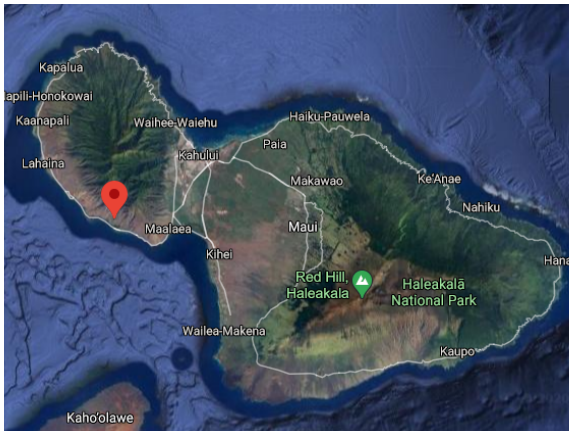
# Ukumehame Reservoirs MA-0140



W 156.58729\* Ukumehame (212).JPG 1:08:13 PM



Grouted Rip Rap Upstream Slope in Reservoir #3



- Recommended fine: \$10,000
- Dam status: Empty flow pool; seepage issues; undersized spillway
- Owner's current plans: Reduce capacity to non-jurisdictional size
  - Permit approved by BLNR in Nov 2017 (exp. 2022) to remove the dam
  - Seeking funding to start construction
- No level gage and no monthly monitoring reports
- Owner was informed of dam deficiencies in reports and notices dating back to 2008, but no long-term safety improvements have been completed





## Ukumehame (MA-0140) Scorecard & Penalty Breakdown

### SCORECARD

Owner	Dam ID	Dam Name	Dam Status	Owner's Plan	Level Gage	Monthly Reports	Consultant Retained	Studies	Permit Application	Construction Start	Action Recommended
Typical cost of remediation -->					\$12-15K	No Cost	\$50-100K	\$50-200K	\$10-30K	> \$500K	
Ukumehame Water Assoc.	MA-0140	Ukumehame	Empty, flow pool	Reduce cap to non-juris, but pends funding	5/30/20	No	Done	Done	Done	8/30/22	\$10,000 fine
					TBD					TBD	
			Recommended fine amount -->		\$5,000	\$5,000					
					GREEN rating:	Done or completed		RED rating:	"No," or missed deadline and no plan (TBD)		

